

DECLARATION UNDER 37 C.F.R. § 1.132	Application #	10/562,394
	Confirmation #	8530
	Filing Date	May 16, 2006
	First Inventor	NORTON
	Art Unit	1794
	Examiner	King, Felicia C.
	Docket #	P07962US02/MP

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S I R:

I, Mark Norton, declare that:

1. I am one of the co-inventors in the present application. I have been involved in all stages of the development of the subject matter disclosed in the present application. I am aware of the pending claims in the present application, as well as the Office Action mailed February 3, 2010.

2. The present invention is directed to a novel discovery by the inventors, namely that consumer liking, i.e. taste preference, for a coffee product can be affected by the addition of a single naturally occurring component in coffee, linalool. In one particular embodiment in the present invention, linalool is added to increase the amount to be at least 25% higher than the amount of linalool naturally occurring in whole bean or roast and ground coffee to which the linalool is added or the amount of linalool added so that a total linalool amount of at least 2,000 µg/kg. In further alternative forms, linalool is added to increase the

amount by at least 50% or at least 100% more than the naturally occurring amounts of linalool or to a total amount of at least 3,000, 4,000, 6,000, 8,000, 10,000 or 16,000 µg/kg.

3. As noted in the Declaration under 37 C.F.R. § 1.132 of Jeff Stagg, submitted November 13, 2009 (hereinafter "the Stagg Dec."), and the Declaration of Mark Norton, submitted March 26, 2009 (hereinafter "the Norton 2009 Dec."), coffee itself is a complex product which includes many compounds. Of these compounds, only a few have previously been considered relevant to the taste and aroma in the final coffee beverage. When processing coffee beans with an intent of positively affecting the intensity of one flavor attribute, commonly there is a negative effect on at least one other flavor attribute, which is linked to the chemistry of coffee flavor compounds which undergo chemical reactions, depending on the roast conditions.

4. Prior to this invention, the extent to which the coffee component linalool would have on the flavor of coffee was unknown. Moreover, in the coffee art, linalool was not believed to be a "major" important coffee flavor driving consumer liking. See Norton 2009 Dec., ¶ 7, for a discussion as to what was understood by one of ordinary skill in the coffee art with regard to the lack of importance of linalool as a flavor driving consumer liking.

5. Further, as discussed in the Norton 2009 Dec., ¶ 9, prior to the present invention, the addition of linalool was considered to produce an "undesirable note and disharmony with notes of a coffee roast."

6. Authoritative references in the coffee art at the time of the invention teach to either not add linalool to coffee or that linalool is insignificant to the overall taste in coffee. Although U.S. Patent No. 4,590,085 (hereinafter "Sidoti") states in the "Background of the Invention" section to the patent that "linalool, 2-nonenal which is used to enhance the flavor of coffee" (Sidoti, column 1, lines 37-40), Sidoti fails to cite any authority for such an assertion that linalool is used to enhance the flavor of coffee. It is noteworthy that Sidoti was filed on March 18, 1985, issued on March 20, 1986, and is directed to a method of intensifying the inherent flavors in beer (see, e.g., Sidoti, abstract). Authoritative texts in the coffee art, published after Sidoti, disclose that, at the time of the present invention, linalool was either not considered to be important to coffee flavor or to have a negative effect on coffee flavor, depending on the reference. For example, Flament 2001 (Appendix C, Norton 2009 Dec.) (hereinafter "Flament") and Blank et al. (1992) (Appendix B, Norton 2009 Dec.) both disclose the negative effect of linalool on the flavor of coffee. For example, Flament states that linalool has an "undesirable note in disharmony with the notes of a roasted coffee." Other authoritative texts in the coffee art, at the time of the invention, teach the non-relevance or unimportance on linalool as a coffee flavor (see, e.g., Norton 2009 Declaration, ¶ 9; Blank et al. (1992) (Appendix B, Norton 2009 Dec.); and Illy (1995/2005) (Appendix D, Norton 2009 Dec.), all noting the absence of linalool as a component in coffee).

7. Based on what one of ordinary skill in the art coffee art would have known at the time of the invention, including authoritative texts and references as discussed above in paragraph 7, notwithstanding the statement in Sidoti with regard to adding linalool to coffee, one of ordinary skill in the art would not have been led to add linalool in the

amounts claimed. One would have considered linalool to be unimportant or even undesirable, based on the authoritative texts. Therefore, even if one of ordinary skill in the art would have considered the statement in Sidoti with regard to adding linalool to coffee, one of ordinary skill in the art would not have been led to add a significant amount of linalool, believing that such would be undesirable in view of the understanding of one of ordinary skill in the art at the time of the present invention.

8. Furthermore, typically, one does not add a single flavor component to coffee; instead, one adds several flavorants simultaneously to a coffee product. Accordingly, one of ordinary skill in the art would not have arrived at the claimed added amounts of linalool, in view of the statement in Sidoti, and in view of what is known by one of ordinary skill in the art, since one would not be adding linalool by itself to coffee to enhance coffee flavor.

9. In contrast to the lack of complete disclosure in Sidoti and contrary to the authoritative coffee references, the present inventors discovered, surprisingly, that linalool (a flavorant previously used as a control in their prior studies of coffee flavor additives), which was believed to be unimportant or undesirable, actually drove consumer liking. This was surprising, since linalool was not considered to be desirable, or at least not important, and because prior to the present invention, it was believed that enhanced coffee flavor was produced through multiple flavorants, not a single coffee flavor additive (see present specification, paragraphs [0038] and [0039]). Through numerous studies, including those described in the present specification, including Tables 3 and 4, it was determined that as little as 2,000 µg/kg linalool in a soluble coffee produced an enhanced and perceived sensorial difference over the "reference coffee" (the coffee blend to which linalool is

added). Less than 2,000 µg/kg of linalool did not have a desirable effect (see, e.g., present specification, paragraph [0047]). Accordingly, having at least 2,000 µg/kg linalool produced a surprising and unexpected result from what one of ordinary skill in the coffee art would have understood at the time of the present invention.

10. The undersigned declares further that all statements made herein of his knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this ____ day of August, 2010.

Mark Norton